Activity teacher notes 3.1
3.1 Protecting special places

<table>
<thead>
<tr>
<th>Levels:</th>
<th>LP, P, S</th>
</tr>
</thead>
<tbody>
<tr>
<td>Focus curriculum areas:</td>
<td>Society and history</td>
</tr>
<tr>
<td>Supporting curriculum area:</td>
<td>English/literacy</td>
</tr>
<tr>
<td>Key concepts:</td>
<td>Communicating, rules, social responsibilities</td>
</tr>
</tbody>
</table>

**Understanding goals**
To raise student awareness of the community effort involved with looking after land.
For students to speculate about what community land would be like without any guidelines/rules.
Students practice avoiding confrontation.

**Pre-activity**
What are the rules of the school grounds? Why we have them?
Discuss rules you have for your own back garden. How do they differ from the school grounds?

**Activities**
Choose your favourite piece of land. It may be a picnic spot, relative's block, grandparent's farm, local bush or a place you like to visit.
1. What are you allowed to do there? What are you not allowed to do there?
Think about rubbish, fires, buildings, trees, shrubs and animals. List any rules or guidelines that you or your family have made to look after that land.
2. Research and list as many laws as you can about Tasmanian wildlife.
3. Can you think of some extra rules that would benefit the wildlife and plants? Write them down and share them with a partner, or share with the class and list on the board.
4. What would your favourite piece of land be like without these rules?
5. Make a copy of the Background note 3a - Rules for park visitors. Compare these rules to your rules.
   a. Students make dot points about why they think each (or one) rule is necessary. You may need to do some research on the web or in the library.
   b. Predict the effects of people not following the rule.
   c. List any reasons you may have for disagreeing with the rule.
   d. Present your findings to the class.
6. Choose one of our national park rules for visitors. Design a poster or a sign to explain that rule to visitors. Class groups should choose different rules. You may wish to use symbols.

**Changing our behaviour**
7. Think/pair share: Imagine you are enjoying watching a video and someone wants to watch something different on the tv. Brainstorm a list of possible outcomes and the sorts of conversations that would lead to those different outcomes.
8. Discuss how you like your parents to tell you to do something differently.
a. What approaches do you respond well to? What approaches annoy you? How can you
avoid confrontation?
b. In pairs role-play the model parent asking a child to clean up their bedroom.
c. Role-play the model child asking their parent for a ride somewhere when you know
they are busy.
9. In pairs, role-play a ranger and someone walking their dog in a national park. Choose
and play the same person for a and b.

Role-Play
The ranger begins by telling the dog owner exactly and clearly what the rules are and what
the dog owner must do. (3 mins)
a. Start with the ranger being friendly, polite and nice to your dog. Assume the owner
didn’t realise that dogs were not allowed, and wants to do the right thing. The ranger will
explain clearly all the reasons why it is not a good idea. The ranger may also suggest
another place nearby where the person can go instead. (3 mins)
b. Discuss which method you think was most effective. How did you feel about being the
ranger in each case? How did it feel being the person with the dog?
c. Swap roles so the person with the dog becomes the ranger and repeat role-plays a and
b.
10. Role play a scenario where animals are being harmed (e.g. fishing using frogs as bait).
3.2 Managing bushland

**Levels:** UP, S, SS

**Focus curriculum areas:** Society and history

**Supporting curriculum area:** English/literacy, science

**Key concepts:** Land management, reports, community needs

### Understanding goals
To investigate the many values of a local area. To become familiar with the components of a basic management plan by writing one for a local area.

### Pre-activity
Look at maps and topography of the local area. Look at one of our park management plans.

### Activities
A site visit is recommended. – allow time to observe the geology, vegetation, wildlife and other features.

1. Find out about people who look after some local land. Compile a list of questions about the land, that you might ask people like the local council, environmental scientists, water engineers and neighbours.

2. Examine some local public land – bushland, wetland or a coastal area. Propose a basic management plan for that area. Work in groups and write one or two sentences or dot points for each of the following:

#### A. Description of the reserve/park:
Explain what it is like now
- An overview of the reserve (Explain its exact location)
- Location, regional and global context (Is there anything unique about the land?)
- History of the reserve or park (Is there any evidence of past occupation or use?)
- Aboriginal values
- European heritage, historic values
- Geodiversity, natural landscape, climate

Vegetation (Do you know any special plants that are found there?)
- Native fauna, alien species, weeds, threatened species (Do you know any special animals that live there?)
- Scientific research and monitoring (Do you think something needs researching?)
- Rehabilitation (Are any old roads or paths blocked and plants regrowing?)

Water - rivers, creeks, pools

#### B. Visitor activities and infrastructure.
Explain the activities that you think are allowed and those that are not allowed. Are there other activities you think that should be allowed?
What are the recreation opportunities (Examples of controversial activities may include bike riding, caravans, fishing, boating)

**C. Primary production**
What activities do you think are allowed and what are not?

- Examples may include bee-keeping, aquaculture, commercial fishing, driftwood salvage
- Management of human use: zones of services and limited access

**D. Public awareness and community support**
List an information signs, interpretation and education materials available.

- Would you like to see more information about the reserve available?
- Have the public been consulted and is the community involved?

**E. Other issues and conclusion**
- Will you continue to monitoring and evaluate the land?
- When will you review the plan?
List any thing else you would like to see addressed. Are there any improvements you would like to make to the land?
Can you think of how you would improve it in a way that would take into account the needs of the community as well as the flora and fauna? What would be your first steps?
3. Well done! Present a copy of your proposed management plan to your local council, library or national park.

**Going further**
See the list of our park management plans
3.3 Island discovery

Levels: LP, P, S

Focus curriculum areas: Arts, society and history

Supporting curriculum area: Science

Key concepts: Maps, geography, sustainability, tourism

Understanding goals
- To build on the student's understanding of Tasmania by comparing our natural features with those of an imaginary Tamanian island.
- Students to become familiar with maps, keys, scales and symbols used to define geographical features.
- Students synthesise information from atlases in order to create their imaginary island.
- Students investigate the consequences of human activity on local natural conditions.

You will need
- class set of atlases
- Tasmanian bird and mammal guide books
- various maps as examples – include tourist brochure maps with symbols and different scale maps.
- large sheets of paper
- coloured pencils

Pre-activity
Look at the map of Tasmania [PDF 755KB].
- Find where you live, the cities, major rivers and catchments.
- Find the national parks.
In groups, look at various tourist maps.
- Examine the different keys, symbols and scales and discuss whether they are easy to understand.
- List all the types of features you have seen on maps on the board under two columns – natural features and features made by people.

Activities
1. What are some of the consequences of urbanisation and development on Tasmanian birds and mammals?
2. Discuss the impact of development right on the beach at Surfers Paradise.
3. Look at the basic needs of our Tasmanian wildlife - food, shelter and clean water. List ten ways we can all help to look after Tasmania so that it is a suitable home for our native wildlife.
4a. Find out what services the council provides to your school. (Fresh water, sewage disposal, garbage collection, road works, street cleaning, maintenance of footpaths, childcare)
b. Find out what council house rates cost each year in your area. Find out who pays rates.
5. Debate this topic: All development is positive.
6. Research the effects of overpopulation and uncontrolled development in places like Mumbai in India, Tokyo in Japan or Johannesburg in South Africa.

Scenario 1. Discover an island
You have discovered an incredible new island off the west coast of Tasmania! It is usually obscured by low-lying mist. Very few people have ever been there.
a. Using a large piece of paper draw an aerial map of the island you have found.
Include the following using symbols and coloured pencils:

**Geographical features**
- different types of coastline – rocky points, beaches, cliffs
- water bodies – a lagoon, lake, pools, swamp
- river or creek, waterfall
- mountains or hills
- an unusual rock feature

**Vegetation**
- tallest trees, dense forest, rainforest
- open grassland, swamp

**Evidence of human occupation**
- a cave with aboriginal relicts, middens
- an historic hut

b. Because you have discovered your island, you can name it!

**Scenario 2. Natural history of your island**
You do a thorough survey of the island to find out more about its natural wonders.

a. What is the geology like? Is it mostly sandstone, mudstone, granite, dolerite or a mixture? What sort of vegetation can be found on your island?

b. Which native Tasmanian animals would be most likely to live on your island? Use books to find out about Tasmanian birds and Tasmanian mammals. Note using symbols and a key where they may be found.

c. Are there rare and threatened plants and animals on your island? Include them.

d. Sir David Attenborough has just heard about your island and wants to come and make a natural history film. Write him an email (a couple of paragraphs) describing your island and why it is so special. What Tasmanian mammals are found there, what reptiles, what frogs, what birds?

e. If not for low-lying mist, who would have discovered your island? Vasco de Gama, Cook or Bass and Flinders?

**Scenario 3. Will your island survive visitors?**
Here you will examine the consequences of uncontrolled development.

a. Sir David Attenborough’s film is a huge success and people are demanding that all the special ‘values’ of the island are looked after. Research and list reasons why people want to look after special places.

b. What are some of the ways our community looks after special places? Limiting access, locking gates at night only allowing people to stay a certain length of time, monitoring visitor numbers.) One way is to make it a national park.

What are your thoughts about these ways of protecting special places? Discuss with the class. If you decide to protect your whole island, invent a name that will make this obvious to people.

c. Lots of people want to visit the island. What kinds of activities would be available to people visiting the island?

d. Decide on five rules to help protect your island park from being ‘loved to death’. What activities should not be allowed on the island? (See our background note on Rules for Park Visitors for ideas)

e. If lots of people come to visit, you will need to think about toilets and sewerage. You may need to store sewage and pump it into collection tanks or treat it before letting it go out to sea. Is there a good place to locate toilets?

f. If people want to come to see your island, will you let them stay overnight? (On Macquarie Island tourists must sleep and eat meals on board their ship. Would this be an idea for protecting your special island?) If you allow visitors to stay overnight, how many visitors can your island accommodate? Will it only be available to the wealthy? Will you allow camping? Will you build accommodation?

g. Design a brochure to tell people about the special values of your island park and show them how to look after it

**Going further**
Make your island into a 3D model using paper-maché.
Watch David Attenborough’s video of the Galapagos Islands.

**Activity 3.4 - Park manager - Minimising human impacts**

**References**
*Tasmanian mammals – a field guide*, Dave Watts, Peregrine Press 2002
*Field guide to Tasmanian birds*, Dave Watts, New Holland Publishers 1999

Many thanks to Belinda Churchill and Kirsty Medhurst for their input into these activities.
3.4 Park manager - Minimising human impacts

Levels: LP, P, S
Focus curriculum areas: Society and history
Supporting curriculum area: Arts
Key concepts: Sustainability, human impact, national parks

Understanding goals
- Students look at public land from a management perspective.
- Students consider the ‘big’ question: How can we prevent visitors from loving an area to death? They develop strategies for allowing access whilst safeguarding a park’s future.

You will need
Maps of some of Tasmania's national parks:
- Cradle Mountain
- Mt Field
- Freycinet
- Rocky Cape
- Maria Island
- Ben Lomond

Pre-activity
Using the park maps above, locate toilets, campgrounds, roads, picnic spots and Visitor Centres.

Activities
1. Invite a town planner to visit your class. Compose a list of questions to ask them about their job.
2. Use your own national park map or model from Activity 3.3 - Island discovery. In groups discuss the following questions.
   - **Drinking water** People will be thirsty, so you need to have taps and fresh drinking water. What options might you have to get water?
   - **Toilets** If we are to have more visitors, then toilets will be needed. Will you have enough water for flush toilets? If not, what other types of toilets will you consider?
   - **Campgrounds** If camping becomes more popular, some limits may need to be set. How will you regulate the numbers of campers?
   - **Interpretation** People will want to know why the area is so special. Discuss the benefits of signs versus a summer ranger taking guided walks.
   - **Rubbish bins** Will you provide rubbish bins? Remember you are a small park with only 2 full-time staff? What can you suggest people do?
   - **Waste management** How will you deal with human rubbish? Can you think of some creative ways to minimise rubbish?
- **Human safety** Are cliffs clearly marked? Should you have access for disabled people in one particular area?
- **Car parks** How many car spaces do you think you should allow? How would you work that out?
- **Picnic tables and visitor infrastructure** Will they be needed? How would you choose a spot for a picnic table?
- **Roads** Should some roads be sealed or should they all remain as dirt roads?

3. Use your map from Activity 3.3 - Island discovery, or draw a map or 3D park model of your park. Mark where you would provide the following for visitors:
   - toilets
   - roads
   - car park
   - fresh drinking water
   - camping place
   - a lookout
   - a short walk
   - a small park office and garage.

Provide a key and a scale for your map.

3. Share what you like most about your park.

4. Think of some rules for your park to minimise human impacts.

5. Design a pamphlet to attract tourists about your park – include pictures and any interesting information.

**Going further**

Compare your plan with a Parks and Wildlife management plan. How could you improve your plan?

**Park Management Plans**

- Freycinet National Park
- Douglas Apsley National Park
- Maria Island National Park
### Understanding goals
Students look at the far-reaching consequences of fire, including loss of personal property, human and animal life. They understand terms such as 'total fire ban'.

Students practice school fire drill and review home fire plans.

### Pre-activity
Practice your school fire drill.
Review your home fire action plan, write up a procedure with a map.
Discuss the idea of losing special things – what would students miss if a fire burnt their local park?
Discuss the dangers of wildfire.

### Activities
1. a) What does Total Fire Ban mean? Use the Tasmanian Fire Service web site to help you.
b) What does fire permit period mean?
c) Should you ever leave a fire unattended? Why not?
2. Find out about fire danger ratings. What weather conditions would lead to a high fire danger alert?
3. As a class, discuss/debate: "People should be allowed to light fires any time and any place they want to".
4. a) How are people affected when there is an uncontrolled bush fire? Research the Sydney bushfires, the 1967 Tasmanian fires or Black Wednesday in Victoria.
b) What are some of the consequences of uncontrolled fire in national parks and reserves?
5. Make a list of things people can do to help minimise wildfire.
6. What do people who live near the bush need to know about staying safe during a bushfire? Research using the Tasmanian Fire Service web site to help you.
7. Design a poster around one of these to remind people to be careful with fire. Design your poster so it could be used in a national park.
8. For homework, interview an older person who has been close to a big bush fire. (You can do this by telephone.) Ask them some questions about what the fire was like.
   - What do they remember most?
   - Did they feel in danger, or concerned for people they knew?
   - Did they lose any property?
   - Were there any homeless or dead animals?
   - How long did it take for the land to recover?
• Has it made them more careful about lighting fires outside?

9. In pairs, discuss how you would feel if your home burnt down and you lost everything?

10. Research preventative steps you can take to reduce the risk of fire in your home. Use the Tasmanian Fire Service web site to help you

11. In pairs, discuss how you think the community should deal with people who deliberately light bushfires. Can you think of any ways to make them responsible for their actions and aware of the devastation they cause?

12. What number do you call to report a fire?

Going further
For information on preventing fires and the Tasmanian Fire Service see http://www.fire.tas.gov.au/
Watch their DVD, "Bushfire - prepare to survive"
Levels: P, S, SS

Focus curriculum areas: Society and history

Supporting curriculum area: Mathematics/numeracy

Key concepts: Ethics, regulations, management

Understanding goals
- Students look at management issues concerning the boundaries between different forms of land use.
- Students to identify ethical principles relating to land management issues along park boundaries, including the World Heritage Area.

Pre-activity
Identify the differences in opinion that can arise between suburban neighbours regarding their shared fence. What are some issues that may arise?
What are your responsibilities when you share a boundary with a neighbour?

Activities
1. Using an atlas or a map, look at the park boundaries.
a. Using the scale on the map, work out approximately how many kilometres long and wide the park is.
b. Which national park has the largest area and the longest boundary?
c. Which parks have very remote boundaries? What would this mean for work that needs to be done in the park?
2. What types of land use might occur on the boundaries of parks in Tasmania?
3. In pairs, list and discuss some of the problems associated with managing the boundaries of a park. Problems might include:
   - uncontrolled fire coming from private land
   - logging on adjacent land that affects wildlife and the beauty of the landscape
   - poaching
   - shooting
   - spread of weeds or diseases such as Phytophthora root rot
   - stealing firewood (sometimes called wood hooking)
   - wildlife moving from the park to graze on farmland
Can you think of ways to minimise these problems?

What’s so special about Tasmania’s Wilderness World Heritage Area?
4. Summarise what World Heritage Area means? (see whc.unesco.org)
5. Why is the Tasmanian Wilderness World Heritage Area valued by the community? Do you personally agree or disagree with these values? (see www.parks.tas.gov.au/wha)
6. What might some of the boundary issues be for the WHA? For each problem, list two possible solutions. Discuss these with your partner.

Related activity
Match each park to its location at Activity 2.1 with our online interactive Tasmanian parks map or the Tasmanian parks map [PDF 204 KB].
3.7 What activities are OK in parks?

Levels: P, S, SS

Focus curriculum areas: Society and history

Supporting curriculum area: English/literacy

Key concepts: Regulations, social responsibilities, protection, opinion

**Understanding goals**

Students look at management issues of public access in parks. Students to identify appropriate activities.

**Activities**

1. In pairs, spend 5 minutes discussing:
   - a) Whether people should be allowed to go wherever they like within a national park. Are there any reasons why people should not be allowed to go to some areas? (Hint: what about seal and bird breeding seasons?)
   - b) Should people be allowed to build shacks in national parks?
   - c) Should people be allowed to permanently camp or set up their caravan permanently in national parks?

Listen to two examples of students discussing the issue of dogs and motorcycles in national parks.

2. What would happen if we had no management plans within our parks?

3. Explain why you think some activities are damaging and why some might be appropriate.

4. Use the table below or this PDF [92KB] to discuss whether you think these activities should be allowed in parks.

<table>
<thead>
<tr>
<th>Activities</th>
<th>Reason this may be damaging</th>
<th>Reason this is appropriate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mining</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trail-bikes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mountain biking</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Horse riding</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Helicopters</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hotels</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Camping anywhere</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uncontrolled building</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uncontrolled visitor numbers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fishing and shooting</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5. Choose one of the above topics to use for a class debate.

**Related activities**

- Activity 3.1 Protecting special places
- Activity 3.4 Park Manager - Minimising human impact
- Activity 3.8 What areas are protected?
**3.8 Measuring up protected areas**

**Understanding goals**
Students compare and contrast areas of reserved land and water in different states of Australia and calculate these areas.

**Activities**
1. a) List five reasons why we protect land.
   b) What does a larger protected area allow for?
2. Think of a marine reserve as an underwater national park. List additional reasons why marine reserves are important for sustainable use of the sea. (see Background Note 3f - Marine reserves)
3. Using the table below, or this PDF [184 KB], calculate the total area for each state using the percentages. Compare the size of Tasmanian protected areas to other states/territories of Australia.

<table>
<thead>
<tr>
<th>State</th>
<th>Area protected in Parks and Reserves</th>
<th>Total area</th>
<th>Protected area by % of state land or waters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tas land (terrestrial)</td>
<td>2 770 699 ha</td>
<td>40.7%</td>
<td></td>
</tr>
<tr>
<td>Tas marine – 2003</td>
<td>76 670 ha</td>
<td>0.4%</td>
<td></td>
</tr>
<tr>
<td>Tas with new Kent Group/Port Davey MPAs</td>
<td>123 308 ha</td>
<td>0.7%</td>
<td></td>
</tr>
<tr>
<td>Victoria (terrestrial)</td>
<td>3 600 000 ha</td>
<td>16%</td>
<td></td>
</tr>
<tr>
<td>Victoria marine</td>
<td>54 000 ha</td>
<td>5.3%</td>
<td></td>
</tr>
<tr>
<td>ACT (terrestrial)</td>
<td>128 212 ha</td>
<td>0.7%</td>
<td></td>
</tr>
<tr>
<td>NSW (terrestrial)</td>
<td>5 957 200 ha</td>
<td>7.4%</td>
<td></td>
</tr>
<tr>
<td>NSW marine</td>
<td>163 000 ha</td>
<td>16%</td>
<td></td>
</tr>
<tr>
<td>NT (terrestrial)</td>
<td>5 043 400 ha</td>
<td>3.7%</td>
<td></td>
</tr>
<tr>
<td>NT marine</td>
<td>223 900 ha</td>
<td></td>
<td></td>
</tr>
<tr>
<td>QLD (terrestrial)</td>
<td>7 120 217 ha</td>
<td>4.1%</td>
<td></td>
</tr>
<tr>
<td>QLD marine</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SA (terrestrial)</td>
<td>25 243 900 ha</td>
<td>25.7%</td>
<td></td>
</tr>
</tbody>
</table>
4. Rank the states/territories from 1–8, with 1 being the state with the largest total protected area.
5. Which state has the most reserved land? Which state has the least reserved land?
6. Which state has the largest area under marine protection?
7. Which state has the least area of marine protection?
8. What conclusions can you make after looking at these numbers?
9. Discuss whether you believe that Tasmania needs a larger area of protected land or sea for the future.

Going further
See our links to national parks agencies around Australia.
Activity teacher notes 3.9
3.9 Solving problems in parks - prioritising work

Levels: S, SS

Focus curriculum areas: Society and history

Supporting curriculum area: English/literacy

Key concepts: Management plans, prioritisation

Understanding goals
Students make decisions and prioritise work plans, using a park management plan as an example.

Activities
1. Choose and research one of the following management plans for Tasmanian national parks.
   - Maria Island National Park
   - Freycinet National Park
   - Mt Field National Park
   - Narawntapu National Park

2. Name three issues or problems that managers face in your chosen park. Beside each list at least one possible plan of attack. Fill in a table similar to the following example:

Macquarie Island - work plan

<table>
<thead>
<tr>
<th>Issue</th>
<th>Plan of action</th>
<th>Who would you need to discuss this with?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visitors potentially bringing weeds on footwear to Macquarie Island</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Making sure boats do not fish in the marine protected area</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High numbers of rabbits are destroying the vegetation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Research huts need repair</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3. Imagine you are the park manager. You have limited money and limited staff. How would you prioritise the above issues? Number the issues in the order that you would tackle them.
4. If you were a park manager in a park (not necessarily the one above), what aspects of management would be personally most important to you? How do you think that would differ from your staff’s priorities?

Related activity
Background note 3c - What are park management plans?
**Understanding goals**
Students develop an understanding of management issues in Australian parks.

**Activities**
Land managers in Australia face many issues where people are breaking the law:
- Poaching native birds and animals for trading (e.g. crocodiles, snakes, tropical birds, Tasmanian devils, shearwaters)
- Arson (illegally lighting bushfires)
- Stealing timber for firewood
- Stealing specialty craft wood (e.g. huon pine)
- Stealing plants to sell
- Dumping kittens in bushland
- Harming wildlife
- Walking dogs in ‘no dog’ protected areas
- Driving four-wheel vehicles off the roads and tracks

1. a) In pairs choose one of the problems above and list all the reasons why you think it is not allowed.
b) Create a role-play where one of you is the ranger and one the person committing the offence. The ranger should listen to the person who has been caught. The ranger then provides a convincing discussion that leaves the offender knowing why it is against the law, and not wanting to do it again.
c) Share your role-play in front of the rest of the class.
2. What are some of the ways we can let people know they are on protected land?
3. What are some of the ways we can let people know what is legal and what is illegal to do with native wildlife?
4. Discuss this statement in groups – People should be able to do whatever they want on public land.
5. Visit some local public land. Can you identify some of the problems that the land managers have to deal with? Can you think of ways to help solve the problems?

**Related activity**
Issues in Australian parks – the local picture – can be compared and contrasted with those in parks of other countries in Activity 3.11 - A global picture.
Activity teacher notes 3.11
3.11 A global picture - parks in perspective

<table>
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<tr>
<td>Focus curriculum areas:</td>
<td>Society and history</td>
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<tr>
<td>Key concepts:</td>
<td>Threatened wildlife issues, research, protection, dangers</td>
</tr>
</tbody>
</table>

**Understanding goals**
Students gain some appreciation of the big issues facing managers of protected land in other parts of the world.

**You will need**
- atlases
- Background note 3g - Risking their lives.

**Activities**
1. Investigate the difficulties faced by park managers trying to look after wildlife, landscapes and visitors in a national park in another country, such as:
   - Chitwan National Park (whc.unesco.org/sites/284.htm)
   - Or you may like to investigate another park you have found on the Internet (perhaps closer to home in Asia). Check out some of the useful links listed at the bottom of this page

   a. Using an atlas, locate the park you are investigating. Is it close to any large towns or a city?
   b. List some of the values of the park. What is the park famous for? Think about flora, fauna, cultural heritage, indigenous values, geology and landscapes.
   c. List at least two difficulties that the park managers may face. Look at the information about the park and think of some difficulties that may be related to these features of the park.
   For example: If the park is one of the last refuges of the Bengal tiger, then protecting them from poachers may be a constant problem.

2. ‘People pressure’ is a big problem in parts of Africa, Asia and South America where many people have no homes or land. They see the resources within parks and feel pressure to take firewood, plants or animals to make money to survive and to support their families.

   In pairs, take it in turns to be an Indigenous landless person talking to a park ranger.
   Discuss the following issues:

   **Indigenous person**
   a. You want to collect shellfish from the shoreline of the park and to hunt wild boar and deer for meat.
   b. You want to fell the trees in the park to build a shelter to protect your family from the weather.
   c. Your family are hungry now – you don’t want to wait for a year for paperwork or political approvals.

   **Ranger**
a. You may want to know how many people this person represents. How many in their extended family?
b. How would you monitor or regulate any laws you enforce?
c. What other avenues might there be for these local people to gain an income and land?

3. Read about the dangers facing many park rangers in other countries in Background note 3g - Risking their lives. If you haven't already, research one or two of the Useful links below. Compare and contrast some of the issues rangers overseas might face compared with rangers in Australia:
   - poaching
   - death by wild animals
   - local people wanting to move in
   - firewood stealing
   - timber cutting
   - mining
   - wildlife such as elephants, tigers, or wolves crossing park borders

4. Make a list of the issues for Australian parks. Make another list for issues in parks around the world.
   - Rate each issue according to how dangerous you think that issue is for rangers. (Low danger, medium, high, very high, very dangerous).
   - What measures can you think of to help solve these problems? List them and discuss in groups of four.

5. In groups, role-play various scenarios that happen in Australia.

Going further
   - The movie, The Thin Green Line, a front line story of Rangers fighting to save what is precious and rare around the world.
   - The Australian Ranger Federation www.ranger.org.au
   - The International Ranger Federation www.int-ranger.net
   - The World Conservation Union www.iucn.org
   - Poaching news article www.mg.co.za/Content/l3.asp?o=29291
Activity teacher notes 3.12
3.12 Rice for a day

Levels: UP, S, SS

Focus curriculum areas: Society and history

Supporting curriculum area: Health and well being

Key concepts: Healthy eating, Global diets

Understanding goals
- For students to appreciate first hand what it is like to eat simple food.
- To be aware of the huge diversity of food we have available to us in Australia. It involves a day at school where they just eat rice and drink water for morning tea and lunch. Students may wish to donate their lunch money to a charity.

Please note: This activity may not be suitable for diabetic children, as rice has a high glycaemic index. You will need agreement from parents for students to take part.

Pre-activity
Discuss and list on the board the different foods you ate yesterday. Divide them up based on food groups and/or breakfast, lunch and dinner.
Discuss what makes a healthy diet.

You will need
A rice cooker and or enough cooked rice for the class.
1. Students can eat a cup of rice for morning tea and a bowl of rice for lunch. (You may want to have soy sauce for an addition at lunch-time.)
2. After lunch discuss how you feel.
3. Research which countries have the lowest nutrition.
4. In pairs discuss some of the reasons why many people around the world are starving.
5. Discuss starvation with the whole class.
6. Write half a page on what the word "survival" now means to you.
7. To involve measurement skills, weigh a cup of cooked rice as a standard measurement.
8. Calculate how much each student eats.
9. Investigate and list bush foods available in Tasmania. Include plants.
10. How long do you think you would manage surviving on bush foods? Think about the quantity of food you eat each day. (You could try weighing your food before you eat it!) Think about food values and what protein you would eat.

Going further
Investigate the various diets around the world.
- Activity 2.4 - Staying alive
- Activity 2.6 - Survivor - sheltering from the weather
- Activity 2.8 - Food for camping - keeping it light
3a Rules for park visitors

- All animals, birds, plants, historic buildings and objects, even rocks and soil are protected in national parks. That means you can’t harm them and you must leave them where you found them.

- Resist the temptation to pick **wildflowers** as they are **protected** too.

- **Pets need to be left at home.** You are much more likely to see a native animal if there are no domestic pets present.

- **Report all feral animals in parks.** Domestic animals gone wild endanger the survival of native animals. If fox populations become established in Tasmania, they will devastate wildlife and create a huge cost to farmers. We need to eradicate foxes from Tasmania. **Report all fox sightings immediately to 1300 FOXOUT.**

- **Feral cats** are a particular problem in bushland and national parks. Cats are efficient hunters and killers and can devastate populations of local birds and small mammals. **Make sure your cat is desexed and can’t roam.**

- **Leave dead trees standing.** Dead trees and hollow logs are homes and shelters to insects, birds, mammals and reptiles. Cutting them down for firewood destroys homes for wildlife. You are not allowed to take firewood from reserves or national parks.
• **Don’t feed the wildlife.** Wild animals are not designed to eat human food. It can cause disease as well and many other problems.

• Please **stay on the walking tracks** – they help to protect the environment.

• **Fire restrictions apply** in many parks. Please check before lighting or planning to light any fires. Many parks are fuel stove only.

• **Take all litter home** with you, both yours and any other rubbish you might find.

• If you are walking, especially overnight, ensure you the walk suits your group’s ability and that the group is carrying all the **safety equipment** that may be needed.
When we think of jobs in national parks we generally think of rangers. However to look after our national parks and reserves requires a huge array of other jobs – and teamwork is important!

What exactly do rangers do? Read on and you will get an idea of the sorts of jobs they do. You can also find out about the great diversity of other jobs in the Parks and Wildlife Service and how you can work towards getting employment in this area.

For a one page summary, read these career notes [PDF 124 KB].

Senior positions
Parks and Reserves Managers and Senior Rangers are involved with: staff and budget management; project management; liaising with government agencies (such as the Tasmania Fire Service, Police, Forestry) and local businesses; policy development; conservation planning for flora, fauna and cultural heritage (Aboriginal and European) and much more. They generally have University degrees in Applied Science/Science or Environmental Management. They have studied topics like flora, fauna, planning, engaging the local community, indigenous issues, heritage building preservation, weeds and endangered species.


Park rangers
Rangers are involved in daily land management issues. Some of this work is in the field and hands on. Rangers use computers, manage budgets, fight fires, work with local communities, assist visitors, rescue animals and people, drive tractors, clean facilities, carry out enforcement, spray weeds, control feral animals and much more. They may have studied at University or TAFE (www.tafe.tas.gov.au) and have skills in Conservation and Land Management - including mechanics, chainsaw safety, occupational health and safety, environmental management, knowledge of plants, animals, feral cats/foxes, weeds - poisoning techniques.

Wildlife specialist jobs
These jobs include zoologists, marine biologists, threatened species/feral pest scientists, botanists, earth scientists and game management. They work with wildlife surveys, devils, eagles, threatened species flora etc.

Rangers regularly work with these specialists who are in a different department but closely linked – the Department of Primary Industries and Water. Many students will think of this work when they think of ‘Rangers’. Qualifications are usually University degrees in zoology/botany/environmental management often with Honours or Masters.
Other Park-based jobs
TAFE qualifications will help you to be competitive in applying for:

- **Field Officers** – assist Rangers, they do practical jobs like building, fire fighting, road maintenance, track maintenance, cleaning toilets, rubbish, picnic shelters and walker huts. There qualifications may include TAFE - Conservation and Land Management courses.

- **Administration** – they organise, balance money/accounts, records and much more. They may also organise practical things like food, transport, staff and accommodation for emergency situations like fires.

- **Visitor Reception Officers** – they have a very good knowledge of their park, other parks around the State, have good customer service and deal with publication sales.

- **Cave Guide** – they are great with people, good communicators and have a strong knowledge of caves and surrounding forests.

- **Discovery (Education) Ranger** – they work full time over the summer running fun, educational activities for park visitors, they are good communicators, and have a very good knowledge of Tasmania’s national parks as well as our plants, wildlife and cultural heritage.

- **Fire Crew** – they have undertaken fire training, work at fires and on control burn programs. They have undertaken remote first aid training, are good at being independent, and work well in teams.

- **Track Workers** – they have good building skills, remote first aid training, are good at living in the bush for periods of time, and are capable and independent.

Regional or City Jobs

- **Managers** – set priorities, coordinate work
- **Planners** – park management plans
- **Interpretation/education** – run training, communication/signs, brochures, website, talks
- **Asset Management** – building standards
- **Public Relations** – media contact/communication
- **Fire Management** – planning/control
- **Heritage management** – historic/marine sites
- **Track Management** – safety/monitor tracks
- **Marine Reserve** – planning/management
- **Park entry** – administer passes
- **Commercial Services** – business/tour operators
- **Finance** – tracking park expenses
- **Human resources** – staff management and recruitment.

How can you find out about current jobs?

Positions are very competitive, and you may need to persevere.

If you are very keen, ring and ask for an appointment to meet one of our staff.
3c What are park management plans?
The Parks and Wildlife Service has developed management plans for all of our major parks and reserves. These plans inform the public about the park and are a guide for park managers, assisting them to take good care of the parks. Management plans for most of our national parks are available online.

Why do we need management plans?
- to coordinate the management of a park, so that everyone is working for the same goals.
- to protect the conservation values of the area
- to protect the threatened species
- to manage visitor impacts
- to clarify what activities are permitted on the land.

What happens when a management plan is being written?
The process allows the community to have input into the management and to know what is planned. A management plan is written by PWS staff with the help of experts. During this process, comments are requested from people in the community.

What sorts of things do management plans look at?
- management objectives and key desired outcomes
- summary of values: including World Heritage values, National Estate values, Nature Reserve values
- management context: international, national, state and local, legislative matters that affect the park
- vision for the future

Contents of a management plan
Description of the reserve/park
- An overview of the reserve (explains its exact location, contains a map)
- Location, regional and global context (explains anything that is unique about the land)
- History of the reserve or park (there may be evidence of past occupation)
- Aboriginal values
- European heritage, historic values
- Geodiversity, natural landscape, climate
- Vegetation, alien species, threatened species
- Native fauna, alien species, threatened species (there may be special plants or animals that live there)
- Scientific research and monitoring
- Rehabilitation (old roads or paths maybe growing over or blocked)
- Fire management (a plan to minimise risk or danger to nearby land, homes, people, wildlife and plants).

Visitor activities and infrastructure
Recreation opportunities, Accommodation, aircraft activities, bicycling, boating, camping, canoeing, caving, climbing, diving, fishing, horse riding, hunting, huts and shacks, plaques and memorials, skiing, surfing, training exercises, vehicle tracks and recreational driving, visitor facilities, public safety and risk management, Commercial tourism operations; concessions, guided tours, film production
Primary production
Beekeeping, mineral exploration, grazing, aquaculture, commercial fishing, huon pine and driftwood salvage
Management of human use: zones of services and limited access

Emergency management
Search and rescue, Oil spills

Public awareness and community support
Promotion and presentation of the reserve, Information, interpretation and education, Public consultation and community involvement

Other issues
Management arrangements, Statutory authorities, Implementation of the plan, Monitoring and evaluation, Review of the plan

Going Further
International agreements and World Heritage Sites
UNESCO This site details all current world heritage sites worldwide.

Tasmania's political and legislative framework
Department of Premier and Cabinet (Tasmania)
www.thelaw.tas.gov.au
This site details Tasmania's legislation, including the National Parks and Reserves Management Act 2002 and the Nature Conservation Act 2002. The types of reserved land are described in Schedule 1 of the Nature Conservation Act. The objectives for management of reserved land are presented in Schedule 1 of the National Parks and Reserves Management Act.

Managing protected areas
Department of the Environment and Heritage
This site provides a wide range of Best Practice Reports in Park Management developed by the Australian and New Zealand Environment and Conservation Council (ANZECC) Working Group on National Parks and Protected Areas Management.

Tasmanian national parks, reserves and World Heritage Areas
Department of the Environment and Heritage
This site provides information about Australian World Heritage sites including the Tasmanian Wilderness World Heritage Area.

Tasmanian Reserve Management Code of Practice 2003
An early Tasmanian national park

Gustav Weindorfer’s vision for Cradle Mountain

The vision of a national park at arose when Kate and Gustav Weindorfer first visited Cradle Mountain in January 1910. Austrian-born Gustav Weindorfer was jubilant to see the view from the summit. This must be a National Park for the people for all time. It is magnificent and people must know about it and enjoy it, he declared.

The Weindorfers’ desire to have the area protected for all time inspired them to build a chalet to encourage people to visit the area, and appreciate its wild beauty and the need for conservation.

The following excerpt is taken from A Man and a Mountain – The story of Gustav Weindorfer by Margaret Giordano 1987.

Thus in March 1912, Gustav Weindorfer began building his alpine chalet. He called it Waldheim, meaning “forest home”. It was designed to suit the natural environment and he built it himself, siting it on his wife's allotment and selecting the timber for it from the ancient King William pines in the interior of the nearby forest.

His great reverence for trees meant that, unlike the earlier pioneers in the island, he had no intention of laying waste around him. King Billy pines (as they are more usually known) are slow growing. The colour of their beautiful, scented, long-lasting wood varies from a pale to a very dark pink. They reach a height of up to 40 metres and attain full maturity only after many centuries, in some cases living as long as 1,200 years or more. .... He had an experienced timber worker helping him to build.

Returning from a trip away – he was appalled to find that the man had disobeyed instructions by felling a huge pine tree close to the building site, when he had been expressly told to get all timber from a distance. Long before conservation became a widely accepted ideal, Gustav considered it essential to live in harmony with his surroundings, making as little impact as possible on the natural environment.

While Gustav constructed Waldheim, Kate managed their farm at Kindred. The chalet was opened to visitors from Christmas 1912. After Kate's death in 1916, Gustav continued to pursue their vision for a national park and was supported by naturalists who had successfully campaigned for the proclamation of the Mt Field National Park.

The hard work and commitment of the Weindorfers and other activists resulted in the Cradle Mountain scenic reserve being declared in 1922. It became one of Tasmania's early national parks. Today, Cradle Mountain is one of Tasmania's most popular visitor destinations.

Going further
Activity 3.4 - Park manager
3e Why do we have fuel stove only areas?
In the past, many environmentally disastrous bushfires have started from walkers' campfires. It is safer to use a fuel stove instead of a campfire.

Fuel stoves are better for many reasons:

- They minimise the chance of wildfire or escaped fires.
- Compared with campfires they are faster, a lot easier to light in wet weather, they don't deplete firewood at campsites and don't leave lasting scars on the landscape.
- They minimise damage to bush, as people often break down green wood near campsites. Not only does this damage the trees but it also can make the campsite unattractive.
- It is very hard to start a fire with wet wood. Having a fuel stove ensures you can prepare warm food and drink if the weather turns bad.
- Fires in peat can smoulder underground for months and are extremely difficult to extinguish. Peat is made up of layers of decomposing organic matter and is the major soil type in rainforest, buttongrass, wet scrub and alpine vegetation. It is illegal to light fires on peat anywhere in Tasmania – this includes lots of popular bushwalking areas, including the Overland Track and South Coast Track.

Fines of up to $5000 can be imposed for lighting fires in Fuel Stove Only Areas. Before going camping, make sure you check fire restrictions with the park ranger.

In an emergency situation if you must have a fire

- keep it small
- don't put rocks around it
- use an existing fireplace – if one exists
- use only dead and fallen wood (leave axes and machetes at home)
- in pristine areas, scatter all traces of the fire when you leave.

Above all make absolutely sure the fire is out before you leave. Put it out with water – not soil. Put your hand on the ground to make sure it is cold!

Going further
See the Tasmanian Fire Service web site
It is just as important to protect special marine environments as it is to look after our special places on the land. In December 1996, people from around Tasmania met to discuss the case for establishing new marine reserves. All major users of the marine environment were invited to send representatives to this meeting. The 25 delegates established the major values and issues of developing marine reserves in Tasmania.

Ten Key Objectives of Marine Reserves
Ten key objectives of marine reserves have been identified as being very important:
- Promote ocean health
- Protect representative samples of coastline for biodiversity and habitat
- Maintain fish species and genetic biodiversity
- Protect scientific and ecological sites and values.
- Fish reproduction and recruitment (movement from reserve to nearby areas)
- Protect threatened species
- Provide scientific reference areas
- Public education value
- Enhance tourism and recreation opportunities
- Protect historic and cultural values.

A closer look at some key objectives

Conservation of marine biodiversity
This is seen as important to:
- preserve all the major different habitats of our coast
- allow communities of fishes and other animals and plants to develop without being disturbed
- protect threatened species
- act as a reservoir of biodiversity (different species)
- act as insurance for future generations

Scientific research
This is important to:
- act as a comparison with non-protected areas
- enable research in areas undisturbed by fishing
- allow the study of the impacts of particular activities, such as diving, in sensitive areas

Education and promotion
This is important to:
- promote responsible use and develop conservation values
- increase knowledge of marine environment and organisms
- provide a useful educational resource for self-education by general public, and for formal education

Protection of wilderness area values
This is important in order to:
- have marine areas that are free of human influence
- enhance our World Heritage Area and National Park status

Fisheries management
Reserves are important to:
- allow study of organisms in a protected untouched area. This gives us baseline data that can be compared with areas where fishing is allowed.
• provide a reservoir of mature organisms with high potential to reproduce and supply young to nearby areas
• provide recruitment of mature individuals to nearby areas for harvesting
• maintain fish stocks in case of a fishery collapse caused by over-fishing
• enable suitable environmental management of sensitive marine areas
• enable the effects of water catchment and land management to be more easily seen in the marine environment (river water, drain water, sewage etc. all have an effect).

**Tourism and recreation**
This is important to:
• increase the attractiveness of Tasmania for ecotourism – the concept of wilderness attracts tourists even though they may spend only a small part of their time here in direct contact with wilderness
• improve people’s quality of life by providing the chance to visit undisturbed and healthy marine areas
• protect some of Tasmania’s unique places, which are not seen anywhere else in the world
• provide attractive areas for producing documentaries – audiences prefer to see beautiful natural areas
• add to the attractiveness of Tasmania in marketing its ‘clean, green and healthy’ image.

**Reduce potential conflicts**
This is important to:
• prevent inappropriate development on our coastline
• provide equitable access allocation – no one group can get special access and the reserve is available for everyone to enjoy.

**Going further**
The Parks and Wildlife Service web site provides information on Tasmania’s marine reserves, as well as seals, whales, shearwaters and penguins in Tasmanian waters.
The job of a park ranger is getting more and more dangerous. All over the world, people working in parks face increasing assaults and physical violence from people poaching native animals. Many rangers are killed trying to protect the animals living within their park. A recent survey of rangers in 17 countries reported that 31 rangers were killed and 32 were injured through violence while on duty in the last five years. The actual figure is certainly much higher.

War zones pose the greatest danger for rangers. Armed soldiers often poach game for food or to finance their military activities. In one horrifying event, 10 rangers were kidnapped and seven murdered by rebels in Uganda’s Murchinson National Park.

John Makombo, Chief Ranger in Bwindi Impenetrable National Park in Uganda, has been shot at several times by poachers. Bwindi is home to 350 of the world’s remaining 600 mountain gorillas.

Dharanidhar Boro, ranger in India’s Kaziranga National Park, was recently forced to use the gun he carries for self-defence when a group of poachers shot at him. Two of the men – hunting the endangered one-horned rhinoceros – were killed.

Though rangers in countries involved in areas of conflict are the most common targets, First World countries also have trouble protecting their rangers. Attacks and threats to rangers in the US increased from 10 cases to 104 between 1998 and 2002.

The International Ranger Federation (IRF) represents Ranger Associations across the world. The IRF and the IUCN – The World Conservation Union – have together started a ‘Protect the Protectors’ program to shield park rangers from ever-increasing violence. The program was launched at the fourth World Ranger Congress held in Australia in March, 2003.

At the fifth World Parks Congress in September 2003 in Durban, John Makombo accepted the Fred Packard Award for service on behalf of all rangers who have given their lives in the course of protecting parks and wildlife.

The IUCN World Parks Congress, held every 10 years, is the major global forum for people working in protected areas.

Going further
See the movie, The Thin Green Line, a front line story of Rangers fighting to save what is precious and rare around the world.

Activity 3.11 - A global picture - parks in perspective